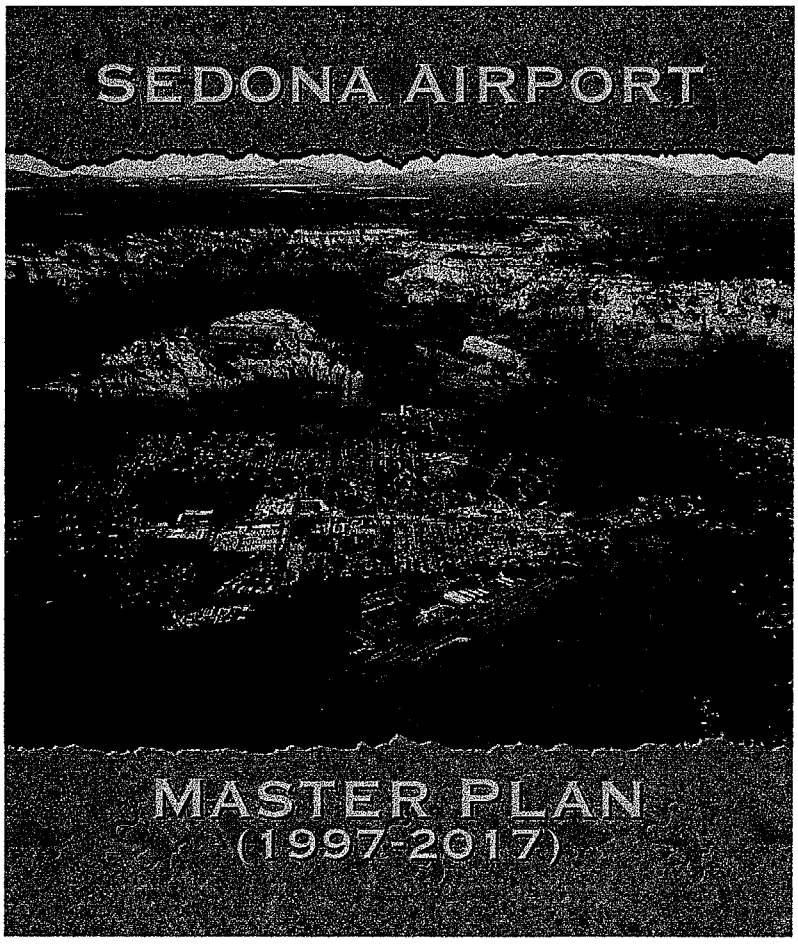


APPENDIX C-
GLOSSARY & ABBREVIATIONS

GLOSSARY
Appendix C

AIR CARRIER - A commercial operator engaging in the carriage of persons or property in air commerce for compensation or hire. Air carriers are certificated in accordance with FAR Parts 121 and 127, and generally operate aircraft having a seating capacity of more than 30 passengers or a maximum payload capacity of more than 7,500 pounds.

AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC) - A facility established to provide positive air traffic control service to aircraft operating on IFR flight plans within controlled airspace. Controls only traffic en route between airports.

AIR TAXI - Schedule and/or nonscheduled aircraft operations carrying passengers and/or cargo for compensation. The capacity of air taxi aircraft is limited by Part 135 of the Federal Aviation Regulations.

AIR TRAFFIC - Aircraft operating in the air or on an airport surface, excluding loading ramps and parking areas.

AIRCRAFT APPROACH CATEGORY - A grouping of aircraft based on a speed of 1.3 times the stall speed in the landing configuration at maximum gross landing weight. An aircraft shall fit in only one category. If it is necessary to maneuver at speeds in excess of the upper limit of a speed range for a category, the minimum for the next higher category should be used. The categories are as follows:

Category A - Speed less than 91 knots.
Category B - Speed 91 knots or more but less than 121 knots.
Category C - Speed 121 knots or more but less than 141 knots.
Category D - Speed 141 knots or more but less than 166 knots.
Category E - Speed 166 knots or more.

AIRCRAFT MIX - The number of aircraft movements categorized by capacity group or operational group, and specified as a percentage of the total aircraft movements.

AIRCRAFT OPERATION - An aircraft takeoff or landing.

AIRPLANE DESIGN GROUP (PHYSICAL CHARACTERISTICS) - The airplane design group subdivides airplanes by wingspan. The airplane design group concept links an airport's dimensional standards to aircraft approach categories or to airplane design groups or to runway instrumentation configurations. The airplane design groups are:

1. **Airplane Design Group I:** Wingspan up to but not including 49 feet.
2. **Airplane Design Group II:** Wingspan 49 feet up to but not including 79 feet.
3. **Airplane Design Group III:** Wingspan 79 feet up to but not including 118 feet.
4. **Airplane Design Group IV:** Wingspan 118 feet up to but not including 171 feet.
5. **Airplane Design Group V:** Wingspan 171 feet up to but not including 197 feet.
6. **Airplane Design Group VI:** Wingspan 197 feet up to but not including 262 feet.

AIRPORT ELEVATION/FIELD ELEVATION - The highest point of an airport's runways measured in feet from mean sea level.

AIRPORT LAYOUT PLAN (ALP) - A graphic presentation, to scale, of existing and proposed airport facilities, their location on the airport, and the pertinent clearance and dimensional information required to show conformance with applicable standards. To be eligible for AIP funding assistance, an airport must have an FAA-approved Airport Layout Plan.

AIRPORT LIGHTING - Various lighting aids that may be installed on an airport. Types of airport lighting include:

1. **Approach Light System/ALS:** An airport lighting facility which provides visual guidance to landing aircraft by radiating light beams in a directional pattern by which the pilot aligns with the extended centerline of the runway on his final approach for landing.

   Condenser-Discharge Sequential Flashing Lights/Sequenced Flashing Lights may be installed in conjunction with ALS at some airports. Types of Approach Light Systems are:

   a) ALSF-I: Approach Light System with Sequenced Flashing Lights in ILS Cat-I configuration.
   b) ALSF-II: Approach Light System with Sequenced Flashing Lights in ILS Cat-II configuration.
   c) SSALF: Simplified Short Approach Light System with Sequenced Flashing Lights.
   d) SSALR: Simplified Short Approach Light System with Runway Alignment Indicator Lights.
   e) MALSF: Medium Intensity Approach Light System with Sequenced Flashing Lights.
   f) MALSR: Medium Intensity Approach Light System with Runway Alignment Indicator Lights.
   g) LDIN: Sequenced Flashing Lead-in Lights.
   h) RAIL: Runway Alignment Indicator Lights (Sequenced Flashing Lights which are installed only in combination with other light systems).
   i) ODALS: Omnidirectional Approach Lighting System consists of seven omnidirectional flashing lights located in the approach area of a nonprecision runway.

2. **Runway Lights/Runway Edge Lights:** Lights having a prescribed angle of emission used to define the lateral limits of a runway. Runway lights are uniformly spaced at intervals of approximately 200 feet, and the intensity may be controlled or preset.

3. **Touchdown Zone Lighting:** Two rows of transverse light bars located symmetrically about the runway centerline normally at 100-foot intervals. The basic system extends 3,000 feet along the runway.

4. **Runway Centerline Lighting:** Flush centerline lights spaced at 50-foot intervals beginning 75 feet from the landing threshold and extending to within 75 feet of the opposite end of the runway.

5. **Threshold Lights:** Fixed green lights arranged symmetrically left and right of the runway centerline, identifying the runway threshold.

6. **Runway End Identifier Lights/REIL:** Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.

7. **Visual Approach Slope Indicator/VASI:** An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high intensity red and white focused light beams which indicate to the pilot that he is "on path" if he sees red/white, "above path" if white/white, and "below path" if red/red.

8. **Precision Approach Path Indicator/PAPI:** (same function and description as for VASI but different configuration).

9. **Boundary Lights:** Lights defining the perimeter of an airport or landing area.

AIRPORT MASTER PLAN - An assembly of appropriate documents and drawings covering the development of a specific airport from a physical, economical, social, and political jurisdictional perspective. The airport layout plan is a part of this plan.

AIRPORT NOISE ABATEMENT PROGRAM - A program designed to mitigate noise impacts around an airport through changes in the manner in which aircraft are flown, or changes in the operation or layout of the airport.

AIRPORT OVERLAY ZONE - A zone intended to place additional land use conditions on land impacted by the airport while retaining the existing underlying zone.

AIRPORT REFERENCE CODE (ARC) - A coding system of aircraft approach speed and wingspan used to related to operational and physical airport design standards.

AIRPORT REFERENCE POINT (ARP) - An ARIP is a point having equal relationship to all existing and proposed landing and takeoff areas which is used to locate the airport geographically.

AIRPORT RESCUE AND FIRE FIGHTING (ARFF) - Airport rescue and fire fighting facilities, including vehicles, personnel, and buildings.

AIRPORT ROTATING BEACON - A visual NAVAID operated at many airports. At civil airports, alternating white and green flashes indicate the location of the airport.

AIRSIDE - Portion of the airport directly related to the arrival and departure of aircraft, including such airfield facilities as runways, taxiways, navigational aids, marking, and lighting. (See LANDSIDE).

AIRSPACE - Space above the ground in which aircraft travel, divided into corridors, routes, and restricted zones.

AIR TRAFFIC CONTROL TOWER (ATCT) – A facility at an airport operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic within an airport traffic area.

AMBIENT NOISE - All encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far.

ANNUAL SERVICE VOLUME (ASV) - ASV is a reasonable estimate of an airport's annual capacity. It accounts for differences in runway use, aircraft mix, weather conditions, etc., that would be encountered over a year's time.

APPROACH AND RPZ PLAN - The Approach and RPZ Plan is compiled from the criteria in FAR Part 77, **Objects Affecting Navigable Airspace.** It shows the area affected by the Airport Obstructions Zoning Ordinance and includes layout of runways, airport boundary, elevations, and area topography. Applicable height limitation areas are shown in detail.

APPROACH SLOPES - The ratios of horizontal to vertical distance indicating the degree of inclination of the Approach Surface. The various ratios include:

20:1	For all utility and visual runways extended from the primary surface a distance of 5,000 feet.
34:1	For all nonprecision instrument runways other than utility extended from the primary surface for a distance of 10,000 feet.
50:1/40:1	For all precision instrument runways extending from the primary surface for a distance of 10,000 feet at an approach slope of 50:1 and an additional 40,000 feet beyond this at a 40:1 Approach Slope.

APPROACH SURFACE - An element of the airport imaginary surfaces longitudinally centered on the extended runway centerline, extending outward and upward from the end of the primary surface at a designated slope.

APPROVED INSTRUMENT APPROACH - An instrument approach approved for general use and publication by the FAA. It must meet design, accuracy, and equipment requirements set by the FAA, and is subject to periodic FAA flight checks.

APRON/RAMP - An area designated for aircraft use, other than taxiways and runways. Example uses for an apron include loading and unloading, parking, maintenance, refueling, before take-off engine runup, and as a temporary traffic holding area.

AREA NAVIGATION (RNAV) - A method of navigation that permits aircraft operation on any desired course within the coverage of station-referenced navigation signals or within the limits of a self-contained system capability.

ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT) – Arizona Department of Transportation – An agency of the State of Arizona government responsible for planning, design, construction and maintenance of transportation facilities.

AUTOMATIC DIRECTION FINDER (ADF) - An aircraft radio navigation system, which senses and indicates the direction to a NonDirectional radio beacon (NDB), ground transmitter. Direction is indicated to the pilot as a magnetic bearing or as a relative bearing to the aircraft, depending on the type of indicator installed in the aircraft.

AUTOMATED FLIGHT SERVICE STATION (AFSS) - An air traffic facility, which provides pilot briefing and en route communications; receives and processes flight plans; and offers other services to aviators. Some of these services are provided on an automated basis.

AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS) - The continuous broadcast of recorded noncontrol information intended to improve controller effectiveness and relieve frequency congestion by automating the repetitive transmission of essential but routine information.

AVIGATION AND HAZARD EASEMENT - An easement which provides right of flight at any altitude above the approach surface, prevents any obstruction above the approach surface, provides a right to cause noise vibrations, prohibits the creation of electrical interference's and grants right-of-way entry to remove trees or structures above the approach surface.

BASED AIRCRAFT - An aircraft permanently stationed at an airport.

BUILDING RESTRICTION LINE (BRL) - A line shown on the Airport Layout Plan beyond which airport buildings must not be positioned in order to limit their proximity to aircraft movement areas.

CAPACITY - Capacity (throughput capacity) is a measure of the maximum number of aircraft operations, which can be accommodated on the airport component in an hour. Since the capacity of an airport component is independent of the capacity of other airport components, it can be calculated separately.

COMMERICAL SERVICE - Commercial service airports are public-use airports, which receive, scheduled passenger service aircraft and which annually enplane 2,500 or more passengers.

COMMUTER AIR CARRIER - An air carrier, certificated in accordance with FAR Part 135, which operates aircraft with a maximum of 60 seats and provides at least five schedule round trips per week between two or more points, or which carries mail.

COMPREHENSIVE PLAN - A set of public decisions dealing with how the land, air, and water resources of an area are to be used. The plan provides for all resources, uses, public facilities, and services in an area. It also incorporates the plans and programs of the various governmental units into a single management tool for the planning area.

CONDITIONAL USE - A land use regulatory procedure in which an applicant must adhere to "standards for approval" as established by local officials. A conditional-use procedure allows extensive public review of any development being considered.

CONTROLLED AIRSPACE - An airspace of defined dimensions which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.

a. Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D and Class E airspace.

b. Controlled airspace is also that airspace within which all aircraft operators are subject to certain pilot qualifications, operating rules and equipment requirements in FAR Part 91 (for specific operating requirements, please refer to FAR Part 91). For IFR operations in any class of controlled airspace, a pilot must file an IFR flight plan and receive an appropriate ATC clearance. Each Class B, Class C and Class D airspace area designated for an airport contains at least one primary airport around which the airspace is designated (for specific designations and descriptions of the airspace classes, please refer to FAR Part 71).

c. Controlled airspace in the United States is designated as follows:

1. CLASS A: Generally, that airspace from 18,000 feet MSL up to and including FL 600, including the airspace overlying the waters within 12 nautical miles of the coast of the 48

contiguous States and Alaska. Unless otherwise authorized, all persons must operate their aircraft under IFR.

2. CLASS B: Generally, that airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of airport operations or passenger enplanements. The configuration of each Class B airspace area is individually tailored and consists of a surface area and two or more layers (some Class B airspace areas resemble upside-down wedding cakes) and is designed to contain all published instrument procedures once an aircraft enters the airspace. An ATC clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace. The cloud clearance requirement for VFR operations is "clear of clouds."

3. CLASS C: Generally, that airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C area is individually tailored, the airspace usually consists of a surface area within a 5 nautical mile (NM) radius, an outer circle with a 10NM radius that extends from 1,200 feet to 4,000 feet above the airport elevation and an outer area. Each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while within the airspace. VFR aircraft are only separated from IFR aircraft within the airspace. (See OUTER AREA.)

4. CLASS D: Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be Class D or Class E airspace. Unless otherwise authorized, each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while in the airspace. No separation services are provided to VFR aircraft.

5. CLASS E: Generally, if the airspace is not Class A, Class B, Class C or Class D, and it is controlled airspace, it is Class E airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Also in this class are Federal airways, airspace beginning at either 700 or 1,200 feet AGL used to transition to/from the terminal or en route environment, en route domestic and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 MSL over the United States, including that airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States and Alaska, up to, but not including, 18,000 feet MSL and the airspace above FL 600.

CONVENTIONAL HANGAR - A large building used to store more than one aircraft and/or to conduct aircraft maintenance.

CRITICAL AIRCRAFT - In airport design, the aircraft which controls one or more design items such as runway length, pavement strength, lateral separation, etc., for a particular airport. The same aircraft may not be critical to all design items.

CROSSWIND RUNWAY - A runway additional to the primary runway to provide for wind coverage not adequately provided by the primary runway.

DECISION HEIGHT (DH) - With respect to the operation of aircraft, DH means the height at which a decision must be during an ILS instrument approach to either continue the approach or to execute a missed approach.

DEPENDENT VARIABLE - The variable that is of interest to the researcher, the variable that is not forecast. In regression analysis, the variable on the left-hand side of the equation.

DISPLACED THRESHOLD - A threshold located at a point on the runway other than at the runway end. Except for the approach standards defined in FAR Part 77, approach surfaces are associated with the threshold location.

DISTANCE MEASURING EQUIPMENT (DME) - A navigation ground station capable of receiving interrogations from aircraft and transmitting signals which allow time, speed, and distance computations to be made. The station is usually sited with VOR and, at times, an ILS.

EASEMENT - The legal right held by one party to make use of the land of another for a limited purpose.

ECONOMETRIC METHODS - Regression correlation techniques applied to a great variety of forecasting problems to ascertain the relationships between the dependent variables and such explanatory and logically relevant economic variables as income, demographic variables such as population, and other market factors, such as usage impedance and intermodal competition. (See Regression Equation).

ENVIRONMENTAL ASSESSMENT (EA) - A concise public document, prepared under the guidelines of the **National Environmental Policy Act of 1969**, and for which a federal agency is responsible that serves to:

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

2. Aid an agency's compliance with the Act when no environmental impact statement is necessary.

3. Facilitate preparation of a statement when one is necessary.

It includes brief discussions of the need for the proposal, of alternatives as required, of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

FEDERAL AVIATION ADMINISTRATION AIRPORT IMPROVEMENT PROGRAM (AIP) – A grant-in-aid program funded by the Airport and Airway Trust Fund.

FEDERAL AVIATION REGULATIONS (FAR), PART 36 - FAR Part 36 contains noise certifications standards for most airplane types, generally requiring newly designed and manufactured aircraft to be significantly quieter than older aircraft.

FEDERAL AVIATION REGULATIONS (FAR), PART 77 - Part 77, *Objects Affecting Navigable Airspace*, establishes standards for determining obstructions to navigable airspace.

FEDERAL AVIATION REGULATIONS (FAR), PART 150 - Implements portions of Title I of the *Aviation Safety and Noise Abatement Act*. It specifically establishes a single system for the measurement of airport (and background) noise, a single system for determining the exposure of individuals to airport noise, and a standardized airport noise compatibility planning program.

FIXED BASE OPERATOR (FBO) - A private firm providing airport services such as fuel sales, aircraft maintenance, aircraft rental, and flight instruction.

FLIGHT SERVICE STATION (FSS) - A facility operated by the FAA to provide flight service assistance.

GENERAL AVIATION (GA) - The portion of civil aviation which includes all facets of aviation except scheduled air carriers.

GENERAL AVIATION AIRPORT - General Aviation airports are either publicly or privately owned airports which serve general aviation aircraft users.

GLIDE SLOPE (GS) - Provides vertical guidance for aircraft during approach and landing. The glide slope consists of the following:

1. Electric components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as an ILS, or

2. Visual ground aids, such as VASI, which provide vertical guidance for a VFR approach or for the visual portion of an instrument approach and landing.

GLOBAL POSITIONING SYSTEM (GPS) – A satellite-based navigational system operated by the United States Department of Defense and made available for civilian use for en route navigation, aircraft instrument approaches and other purposes.

HEIGHT ABOVE TOUCHDOWN (HAT) - The height of the decision height or minimum descent altitude above the highest runway elevation in the touchdown zone (first 3,000 feet of the runway). HAT is a published on instrument approach chart in conjunction with all straight-in minimums. (See DECISION HEIGHT, MINIMUM DESCENT ALTITUDE).

HELIPAD - A small, designated area, usually with a prepared surface, on a heliport, airport, landing/takeoff area, apron/ramp, or movement area used for takeoff, landing, or parking of helicopters.

HOLD HARMLESS AGREEMENT - An agreement that holds airport sponsors or jurisdictions harmless from alleged damages resulting from airport operations. Such agreements are recorded in deeds or permits as a condition of approval of a regulatory land-use decision.

IFR CONDITIONS - Weather conditions below the minimum for flight under visual flight rules (VFR).

IMAGINARY SURFACES - Those areas established in relation to the airport and to each runway consistent with FAR Part 77 in which any object extending above these imaginary surfaces is, by definition, an obstruction.

INDEPENDENT VARIABLE - An indicator on the basis of which the dependent variable is projected. The Independent Variable may or may not cause the interval change in a dependent variable with which it is associated.

INSTRUMENT APPROACH - The act of making an approach to an airport solely by reference to instruments. To be counted in FAA statistics as an instrument approach, the aircraft must descend through clouds at some interval from the initial approach fix to the airport.

INSTRUMENT APPROACH AID - Any of several FAA-approved electronic aids designed to provide guidance to pilots making instrument approaches.

INSTRUMENT FLIGHT RULES (IFR) - Rules governing the procedures for conducting instrument flight. Pilots are required to follow these rules when operating in controlled airspace with a visibility of less than three miles and/or a ceiling lower than 1,000 feet.

INSTRUMENT LANDING SYSTEM (ILS) - The instrument landing system is designed to provide electronic instrument guidance to the pilot to permit exact alignment and angle of descent of a properly equipped aircraft on final approach for landing.

INSTRUMENT OPERATION - A takeoff or landing of an aircraft which has an instrument flight clearance.

INTEGRATED NOISE MODEL (INM) - The FAA's Integrated Noise Model is the standard prediction analysis tool to which all computer-based airport noise exposure models are compared. The INM calculates the total impact of aircraft noise at or around airports. This noise exposure level can be presented in contours of equal noise exposure of any one of the following noise measures. Noise Exposure Forecast (NEF), Equivalent Sound Level (Leq), Day-Night Average Sound Level and Community Noise Equivalent Level (CNEL); however, only the DNL is approved for use with FAR Part 150.

ITINERANT OPERATIONS - All operations at an airport which are not local operations. (See LOCAL OPERATIONS).

LANDING GEAR - That part of an aircraft which is required for landing. Gear may be configured as Single-Wheel Gear (SWG or SW), Dual-Wheel Gear (DWG or DW), or Dual-Tandem-Wheel Gear (DTWG or DTW).

LANDSIDE - Portions of the airport interfacing with or supporting the airfield functions, including such facilities as terminal area buildings, aircraft parking apron, automobile parking area, fuel storage, air cargo, and ground access. (See AIRSIDE).

LAND USE - The present or planned utilization of a given parcel of land. Such land uses are normally indicated or delineated on a land-use map. Land-use maps may indicate usage's for any given time period past, present, or future, and such period should always be indicated.

LARGE AIRCRAFT - Aircraft of more than 12,500 pounds maximum certificated takeoff weight.

LIGHTING AND MARKING OF HAZARDS TO AIR NAVIGATION - Installation of appropriate lighting fixtures, painted markings, or other devices to such objects or structures that constitute hazards to air navigation.

LIMITED AVIGATION EASEMENT - An easement which provides right of flight above approach slope surfaces, prohibits any obstruction penetrating the approach slope surface, and provides right of entry to remove any structure or growth penetrating the approach slope surface.

LOCAL OPERATIONS - Operations by aircraft flying in the traffic pattern or within sight of the control tower, aircraft known to be arriving or departing from flight in local practice areas, or aircraft executing practice instrument approaches at the airport.

LOCALIZER - The component of an ILS which provides course guidance to the runway.

LORAN - An electronic navigational system by which hyperbolic lines of position are determined by measuring the difference in the time of reception of synchronized pulse signals from two fixed transmitters.

LOW INTENSITY RUNWAY LIGHTS (LIRL) - runway edge lighting used to define the lateral limits of a taxiway. The intensity of the lights may be present of controlled to high (HITL), medium (MITL) and low (LITL) depending on the category of airport and use of the taxiway.

MARKET SHARE ANALYSIS - Proportions a large-scale activity down to a local level, assuming that the proportion of the large-scale activity, which can be assigned to the local level, is a regular and predictable quantity. Also known as "ratio" or "top-down" modeling, this method is commonly used to develop micro forecasts from the exogenous sources of macro forecasts.

MEAN SEA LEVEL (MSL) – A datum for defining elevations; usually termed mean sea level.

METEROLOGICAL AVIATION REPORT (METAR) – Surface aviation weather observations taken and reported in a standard international format.

MOVEMENT AREA - The runways, taxiways, and other areas of an airport/heliport which are utilized for taxiing/hover taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports/heliports with a tower, specific approval for entry onto the movement area must be obtained from ATC.

MICROWAVE LANDING SYSTEM (MLS) - An advanced form of precision approach equipment with improved accuracy and fewer siting problems than current ILS. An MLS also can permit curved path approaches to the runway instead of requiring a straight path as an ILS and PAR do.

MILITARY OPERATING AREA (MOA) - A MOA is airspace established outside of Class A airspace area to separate or segregate certain nonhazardous military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.

MINIMUM DESCENT ALTITUDE (MDA) - The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide is provided. (See NONPRECISION APPROACH PROCEDURE).

MISSED APPROACH - A maneuver conducted by a pilot when an instrument approach cannot be completed to a landing. The routes of flight and altitude are shown on instrument approach procedure charts. A pilot executing a missed approach prior to the Missed Approach Point (MAP) must continue along the final approach to the MAP. The pilot may climb immediately to the altitude specified in the missed approach procedure. It is also a term used by the pilot to inform ATC that he is executing the missed approach. At locations where ATC radar service is provided, the pilot should conform to radar vectors, when provided by ATC, in lieu of the published missed approach procedure.

MULTI-ENGINE AIRCRAFT - Reciprocating-powered, fixed-wing aircraft having more than one engine and categorized as weighing more than or less than 12,500 pounds maximum gross weight.

MULTIPLE REGRESSION - regression model with more than one independent variable. (See REGRESSION EQUATION).

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) – An agency of the U.S. Department of Commerce responsible for the collection of weather data and its translation into products and services.

NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS (NPIAS) - A plan prepared annually by the FAA which identifies, for the Congress and the public, the composition of a national system of airports together with the airport development necessary to anticipate and meet the present and future needs of civil aeronautics, to meet requirements in support of the national defense, and to meet the special needs of the Postal Service. The plan includes both new facilities and qualitative improvements to existing airports to increase their capacity, safety, technological capability, etc.

NATIONAL WEATHER SERVICE (NWS) – An agency of the U. S. Department of Commerce and a branch of NOAA responsible for providing nationwide meteorological services to the public and nonmilitary government agencies.

NAVIGATIONAL AID (NAVAID) - Any visual or electronic device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.

NOISE CONTOURS - A noise impact boundary line connecting places on a map where the level of sound is the same. Some of the terminology and methods used in developing noise contours include:

1. **A-Weighted Sound Level (DBA):** Commonly used sound measurement, which approximates the manner in which the human ear responds to sounds.

2. **Composite Noise Rating (CNR):** A measure, taken over a 24-hour period, of the noise environment produced by aircraft operations. The CNR is calculated from aircraft noise and is expressed in terms of the maximum perceived noise level (PNL) and the number of operations in daytime and nighttime periods.

3. **Day-Night Average Sound Level (DNL):** Equivalent noise level produced by airport/aircraft operations during a 24-hour time period, with a 10-decibel penalty applied to the level measured during the nighttime hours of 10pm to 7am.

4. **Equivalent Sound Level (Leq): The** constant sound levels which, in a given situation and time period, conveys the same sound energy, as does the actual time-varying sound in the same period. The equivalent sound level is the same as the average sound level.

5. **Noise Exposure Forecast (NEF):** A measure of the noise environment over a 24-hour period. It is based upon summation of individual noise events over the 24-hour period, with adjustments applied for nighttime noises.

NOISE EXPOSURE AREA/ZONE - An element of the airport impact zone or airport overlay zone used to identify areas sensitive to aircraft noise. Included in the corridor may be:

Severe Noise Impact (75+)
Substantial Noise Impact (65-75)
Moderate Noise Impact (55-65)

NOISE IMPACT - A condition that exists when the noise levels that occur in an area exceed a level identified as appropriate for the activities in that area.

NONDIRECTIONAL BEACON/RADIO BEACON (NDB) - An L/MF or UHF radio beacon transmitting NonDirectional signals whereby the pilot of an aircraft equipped with direction-finding equipment can determine his bearing to or from the radio beacon and "home" on or track to or from the station. When the radio beacon is installed in conjunction with the instrument landing system marker, it is normally called a compass locator.

NONPRECISION APPROACH PROCEDURE/NONPRECISION APPROACH - A standard instrument approach procedure in which no electronic glide slope is provided; e.g., VOR, TACAN, NDB, LOC, LDA, SDF, or ASR.

NONPRECISION INSTRUMENT APPROACH AID - An electronic aid designed to provide an approach path for aligning an aircraft on its final approach to a runway. It lacks the high accuracy of the precision approach equipment and does not provide guidance. The VHF Omnirange (VOR) and the NonDirectional beacon (NDB) are two examples of nonprecision instrument equipment.

NONPRECISION INSTRUMENT RUNWAY - A runway having an existing or planned instrument approach procedure from which a straight-in landing is approved but no electronic glide slope information is available and for which no precision approach facilities are planned.

OBJECT FREE AREA (OFA) - A two-dimensional ground area surrounding runways, taxiways, and taxilanes which is clear of objects except for objects whose location is fixed by function.

OBSTACLE FREE ZONE (OFZ) - The airspace defined by the runway OFZ and, as appropriate, the inner-approach OFZ and the inner-transitional OFZ, which is clear of object penetrations other than frangible NAVAIDS (NAVAIDS whose properties allow failure at a specified impact load).

Runway OFZ: The airspace above a surface centered on the runway centerline.

Inner-approach OFZ: The airspace above a surface centered on the extended runway centerline. It applies to runways with an approach lighting system.

Inner-transitional OFZ: The airspace above surfaces located on the outer edges of the runway OFZ and the inner-approach OFZ. It applies to precision instrument runways.

OBSTRUCTION - An object, which penetrates an imaginary surface, described in the FAA's Federal Aviation Regulations (FAR), Part 77.

OBSTRUCTION LIGHTS - Lights, often red and white, mounted on a surface structure or on natural terrain, to warn pilots of an obstruction.

PARALLEL RUNWAYS - Two or more runways at the same airport whose centerlines are parallel. Designated both by runway number and L (left) or R (right), or, if three parallel runways exist, L (left), C (center), and R (right).

PRECISION APPROACH PROCEDURE/PRECISION APPROACH - A standard instrument approach procedure in which an electronic glide slope is provided, e.g., ILS, MLS, and PAR.

PRECISION APPROACH RADAR/PAR - Radar equipment in some ATC facilities operated by the FAA, and/or the military services at joint0use civil/military locations and separate military installations, to detect and display azimuth, elevation, and range of aircraft on the final approach course to a runway. This equipment may be used to monitor certain non-radar approaches, but is primarily used to conduct a precision instrument approach (PAR) wherein the controller issues guidance instructions to the pilot based on the aircraft's position in relation to the final approach course (azimuth), the glide path (elevation), and the distance (range) from the touchdown point on the runway as displayed on the radar scope.

PRECISION INSTRUMENT APPROACH AID - An electronic aid designed to provide an approach path for exact alignment and descent guidance of an aircraft on final approach to a runway. Instrument Landing System (ILS), Precision Approach Radar (PAR), and Microwave Landing System (MLS) are the existing precision NAVAIDS.

PRECISION INSTRUMENT RUNWAY - A runway having an existing or planned instrument approach that is essentially aligned with the runway centerline and that has electronic glide slope information for guidance of the descent of the aircraft to the touchdown point on the runway.

PRIMARY SERVICE AIRPORT - Primary service airports are public-use airports which receive scheduled passenger service aircraft and which annually enplane one one-hundredth percent (0.01%) or more of the combined total domestic passenger enplanements for all United States air carriers.

PRIMARY SURFACE - A primary surface is longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway. When the runway has no specially prepared hard surface, or planned hard surface, the primary surface terminates at each end of the runway. The width of a primary surface ranges from 250 feet to 1,000 feet, depending on the existing or planned approach system. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline.

r - The correlation coefficient. Measures the degree of association or covariance between the independent and dependent variable. Correlation does not equal causation. (See R^2).

R^2 - The coefficient of determination. Indicates the percentage variation in the dependent variable that is explained by variations in the causal variables.

RADIAL - A magnetic bearing extending from a VOR/VORTAC/TACAN navigational facility.

REGIONAL AIRLINE - An airline providing regularly scheduled passenger or cargo service with aircraft usually seating less than 60 passengers or cargo aircraft with 18,000-pound payload or less. Special provisions, however, enable regional airlines to operate any size aircraft under certain conditions.

REGRESSION EQUATION - A regression equation is the mathematical representation of a regression model. It states that one or more independent variables and a constant term are related to the dependent variable in an additive fashion. The relationship may be linear or one of several curvilinear types.

RELIEVER AIRPORT - Reliever airports are general aviation airports which have the function of relieving congestion at a primary service airport and which provide the general aviation user with an alternate for access to the overall community. Reliever airports receive higher priority for funding assistance than other general aviation airports.

RELOCATED THRESHOLD - A permanent threshold located at the relocated runway end.

ROTATING BEACON - An airport aid allowing pilots the ability to locate an airport while flying under VFR conditions at night.

RUNWAY - A defined rectangular area, on a land airport prepared for the landing and takeoff run of an aircraft along its length. Runways are normally numbered in relation to their magnetic direction rounded off to the nearest 10 degrees, e.g., Runway 01, Runway 26. (See PARALLEL RUNWAYS).

RUNWAY GRADIENT (EFFECTIVE) - The average gradient consisting of the difference in elevation of the two ends of the runway divided by the runway length may be used, provided that no intervening point on the runway profile lies more than five feet above or below a straight line joining the two ends of the runway. In excess of five feet, the runway profile will be segmented and aircraft data will be applied for each segment separately.

RUNWAY LENGTH - LANDING - The measured length from the threshold to the end of the runway.

RUNWAY LENGTH - PHYSICAL - The actual measured length of the runway.

RUNWAY LENGTH - TAKEOFF - The measured length from where the takeoff is designed to being to the end of the runway.

RUNWAY LIGHTING SYSTEM - A system of lights running the length of a runway that may be high intensity (HIRL), medium intensity (MIRL), or low intensity (LIRL).

RUNWAY PROTECTION ZONE (RPZ) - An area (formerly the clear zone) used to enhance the safety of aircraft operations. It is at ground level beyond the runway end.

RUNWAY SAFETY AREA (RSA) - A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

SEGMENTED CIRCLE - A system of visual indicators designed to provide traffic pattern information at an airport without an operating control tower.

SIMPLE REGRESSION - Simple regression involves a single independent variable. It assumes a linear relationship between the independent variable and the dependent variable. That relationship is estimated using the method of "least squares" and a set of observed values.

SIMPLIFIED DIRECTIONAL FACILITY (SDF) - A NAVAID used for nonprecision instrument approaches. The final approach course is similar to that of an ILS localizer except that the SDF course may be offset from the runway, generally not more than 3 degrees, and the course may be wider than the localizer, resulting in a lower degree of accuracy.

SMALL AIRCRAFT - Aircraft of 12,500 pounds or less, maximum certificated takeoff weight.

SPECIAL-USE AIRSPACE - Airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities. Types of special-use airspace included:

1. **Alert Area:** Airspace which may contain a high contain a high volume of pilot training activities or an unusual type of a aerial activity, neither of which is hazardous to aircraft. Alert areas are depicted on aeronautical charts for the information of nonparticipating pilots.

2. **Controlled Firing Area:** Airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons and property on the ground.

3. **Military Operations Area (MOA):** An MOA is an airspace assignment of defined vertical and lateral dimensions established outside positive control areas to separate/segregate certain military activities from IFR traffic and to identify for VFR traffic where theses activities are conducted.

4. **Prohibited Area:** Designated airspace within which the flight of aircraft is prohibited.

5. **Restricted Area:** Airspace designated under FAR Part 73 within which the flight of aircraft, while not wholly prohibited is subject to restriction. Most restricted areas are designated joint use and IFR/VFR operations in the area may be authorized by the controlling ATC facility when it is not being utilized by the using agency. Restricted areas are depicted on en route charts.

6. **Warning Area:** Airspace, which may contain hazards to nonparticipating aircraft in international airspace.

STANDARD ERROR - A measure of the precision of a coefficient. It tells how reliable the relationship has been measured, the standard deviation for a relationship.

STOPWAY - An area beyond the takeoff runway, no less wide than the runway and centered upon the extended centerline of the runway, able to support an airplane during an aborted takeoff without causing structural damage to the airplane, and designated by the airport authorities for use in decelerating an airplane during an aborted takeoff.

T-HANGAR - A-T-shaped aircraft hangar that provides shelter for a single plane.

TACTICAL AIR NAVIGATION (TACAN) - An ultra-high frequency electronic air navigation aid which provides suitably equipped aircraft a continuous indication of bearing and distance to the TACAN station. (See VORTAC).

TAXI - The movement of an airplane under its own power on the surface of an airport. Also, it describes the surface movement of helicopters equipped with wheels.

TAXILANE - The portion of the aircraft parking area used for access between taxiways, aircraft parking positions, hangars, storage facilities, etc. A taxilane is outside the movement area.

TAXIWAY - A defined path, from one part of an airport to another, selected or prepared for the taxiing of aircraft.

TERMINAL AREA - The area used or intended to be used for such facilities as terminal and cargo buildings, gates, hangars, shops, other service buildings, automobile parking, airport motels, restaurants, garages, and automobile service.

TERMINAL RADAR APPROACH CONTROL (TRACON) - An FAA traffic control facility using radar and air/ground communications to provide approach control services to aircraft arriving, departing, or transiting the airspace controlled by the facility. Service may be provided to both civil and military airports. A TRACON is similar to a RAPCON (USAF), RATCF (USN), and ARAC (Army).

TERMINAL RADAR SERVICE AREA (TRSA) - Airspace surrounding designated airports wherein ATC provides radar vectoring, sequencing, and separation on a full-time basis for all IFR and participating VFR aircraft. TRSA's are depicted on VFR aeronautical charts. Pilot participation is urged but is not mandatory.

TERMINAL VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE STATION (TVOR) - An electronic navigation aid that provides guidance, both for en route flights on low altitude "Victor" airways and for non-precision approaches. (See also NONPRECISION APPROACH AID).

THRESHOLD - The beginning of that portion of the runway available and suitable for the landing of airplanes.

TIE-DOWN AREA - A parking area for securing aircraft; can be for overnight (transient operator) or permanent use (in lieu of a hangar).

TIME SERIES DATA - Data that examine a decision unit at different points in time. Trend extrapolation examines a historical pattern of activity and assumes that assumes that those factors, which determined the variation in activity level in the past, will continue to exhibit similar relationships in the future.

TOUCH-AND-GO/TOUCH-AND-GO LANDING - An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway.

TRAFFIC PATTERN - The traffic flow that is prescribed for aircraft landing at, taxiing on, or taking off from an airport. The components of a typical pattern are upwind leg, crosswind leg, downwind leg, base leg, and final approach.

1. **Upwind Leg:** A flight path parallel to the landing runway in the direction of landing.
2. **Crosswind Leg:** A flight path at right angles to the landing runway off its upwind end.
3. **Downwind Leg: A** flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg.

4. **Base Leg:** A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline.
5. **Final Approach:** A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. An aircraft making a straight-in approach VFR is also considered to be on final approach.

TRANSIENT - Operations or other activity performed by aircraft not based at the airport.

TRANSITIONAL SURFACE - An element of the imaginary surfaces extending outward and upward at right angles to the runway centerline and runway centerline extended at a slope of 7:1 from the sides of the primary and approach surfaces to where they intersect the horizontal and conical surfaces.

ULTRALIGHT VEHICLE - An aeronautical vehicle operated for sport or recreational purposes which does not require FAA registration, an airworthiness certificate, nor pilot certification. They are primarily single-occupant vehicles, although some two-place vehicles are authorized for training purposes. Operation of an ultralight vehicle in certain airspace required authorization from ATC.

UNICOM - A non-government communication facility, which may provided airport information at certain airports. Locations and frequencies of UNICOMS are shown on aeronautical charts and publications.

VISUAL APPROACH RUNWAY - A runway intended for visual approaches only, with no straight-in instrument approach procedure either existing or planned for that runway.

VISUAL DESCENT POINT/VDP - A defined point on the final approach course of a non-precision straight-in approach procedure from which normal descent from the MDA to the runway touchdown point may be commenced, provided the approach threshold of that runway, or approach lights, or other markings identifiable with the approach end of that runway are clearly visible to the pilot.

VISUAL FLIGHT RULES (VFR) - Rules that govern flight procedures under visual conditions. Also indicates a type of flight plan.

VOR/VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE STATION - A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the National Airspace System. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature. ATC or FSS may use voice features for transmitting instructions/information to pilots. (See Navigational Aid).

VORTAC/VHF OMNIDIRECTIONAL RANGE/TACTICAL AIR NAVIGATION - A navigational aid providing VOR azimuth. TACAN azimuth and TACAN distance measuring equipment (DME) at one site. (See Distance Measuring Equipment, Navigational Aid, TACAN, VOR).

WIDE AREA AUGMENTATION SYSTEM (WAAS) - A system of ground-based facilities providing differential corrections for GPS satellites and intended to support aviation navigation for the en-route, terminal area, nonprecision and Category I precision approaches phase of flight.

WIND COVERAGE - The percent of time for which aeronautical operations are considered safe due to acceptable crosswind components.

WIND ROSE - A graphic depiction of historical prevailing wind patterns by speed and direction at a given location. A series of concentric circles cut by radial lines indicates the average percentage of time during the observation period that winds were occurring at successive wind speed groupings and by true direction. Wind rose data are used primarily for determining optimal runway alignment for wind coverage.

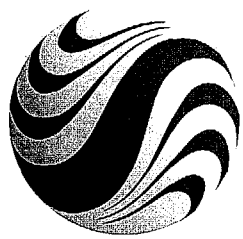
ZONING - The demarcation of a jurisdiction by ordinance into zones and the establishment of regulations to govern the use of the land and the location, height, use, and coverage of structures within each zone.

ABBREVIATIONS

AC	-	Advisory Circular
ADO	-	Airports District Office (FAA)
AFSS	-	Automated Flight Service Station
AGL	-	Above Ground Level
AIP	-	Airport Improvement Program
ALP	-	Airport Layout Plan
ALS	-	Approach Lighting System
ARP	-	Airport Reference Point
ARSA	-	Airport Radar Service Area
ARFF	-	Airport Rescue and Fire Fighting
ASNA	-	Aviation Safety and Noise Abatement Act of 1979
ASR	-	Airport Surveillance Radar
ASV	-	Annual Service Volume
ATC	-	Air Traffic Control
ATCT	-	Airport Traffic Control Tower
BRL	-	Building Restriction Line
DNL	-	Day-Night Average Sound Level
DOT	-	Department of Transportation
EA	-	Environmental Assessment
EIS	-	Environmental Impact Statement
EPA	-	Environmental Protection Agency
FAA	-	Federal Aviation Administration
FAR	-	Federal Aviation Regulations
FBO	-	Fixed Base Operator
GA	-	General Aviation
GPS	-	Global Positioning System
GS	-	Glide Slope
HIRL	-	High-Intensity Runway Lighting
HUD	-	Housing and Urban Development
IFR	-	Instrument Flight Rules
ILS	-	Instrument Landing System
INM	-	Integrated Noise Model
LDA	-	Localizer Directional Aid
LIRL	-	Low-Intensity Runway Lighting
LOC	-	ILS Localizer
METAR		Meteorological Aviation Report
MIRL	-	Medium-Intensity Runway Lighting
MITL	-	Medium-Intensity Taxiway Lighting
MLS	-	Microwave Landing System
MOA	-	Military Operating Area
MSL	-	Mean Sea Level
NAVAID	-	Air Navigation Facility/Navigational Aid
NDB	-	Nondirectional Beacon
NEPA	-	National Environmental Policy Act of 1969
NPIAS	-	National Plan of Integrated Airport Systems
OFA	-	Object Free Area
OFZ	-	Obstacle Free Zone

ABBREVIATIONS (continued)

PAPI	-	Precision Approach Path Indicator
R/R^2	-	Correlation Coefficient/Determination Coefficient
REIL	-	Runway End Identifier Lights
RPZ	-	Runway Protection Zone
SEPA	-	State Environmental Policy Act
STOL	-	Short Takeoff and Landing
TCA	-	Terminal Control Area
TRACON	-	Terminal Radar Approach Control
TRSA	-	Terminal Radar Service Area
VASI	-	Visual Approach Slope Indicator
VFR	-	Visual Flight Rules
VOR	-	Very High Frequency Omnidirectional Range
WAAS	-	Wide Area Augmentation System



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